# Option #1c: Example

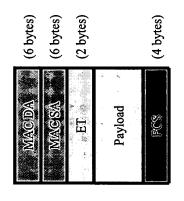
Packet Flow Involving Bridges

#### 802.17

#### Router/Host/Server Client Data Frame

Terminated Packet Flow

Locally Originated and



## Resulting RPR Frame

(2 bytes)	(6 bytes)	(6 bytes)	(2 bytes)	(2 bytes)		(4 bytes)
RPR Header	DSID=DA	SSID=SA	PT=ET	HEC	Payload	FCS

#### Bridge Client Data Frame

(6 bytes)	(6 bytes)	(2 bytes)		(4 bytes)
MACDA	* MACSA	ET	Payload	IRCS

## Resulting RPR Frame

(2 bytes)	(6 bytes)	(6 bytes)	(6 bytes)	(6 bytes)	(2 bytes)	(2 bytes)		(4 bytes)
RPR Header	DSID	SSID	* MACDA	MACSA	PT=ET	HEC	Payload	FCS
			/	1				

mh\_BAH\_Frame\_095.pdf

## **RPR** Control Packet

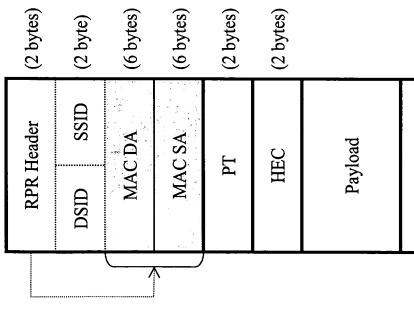
(2 bytes)	(6 bytes)	(6 bytes)	(2 bytes)	(2 bytes)	·	(4 bytes)
RPR Header	DSID	SSID	PT=Control	HEC	RPR Control Payload	FCS

Values of DSID/SSID

- May, but need not, be derived from MAC DA/SA (e.g., using SID DB)
- Must be a member of the Ring Topology Image



## Frame Structure with Station Identifiers: Option #1d



- Bit in RPR Header indicates presence of Remote MAC addresses in frame format
- Frame syntax changed when Remote MACs are present
- MAC reception rules changed to accommodate DSID and SSID (labels)

(4 bytes)

FCS

# Option #1d: Example

Terminated Packet Flow Locally Originated and

Router/Host/Server Client Data Frame

## Packet Flow Involving

## Bridges

**Bridge Client Data** 

#### (6 bytes) (2 bytes) (6 bytes) (4 bytes) Frame ET Payload

(6 bytes) (6 bytes) (2 bytes)

MACDA

## Resulting RPR Frame

(4 bytes)

Payload

(2 bytes)	(1 byte)	(1 byte)	(6 bytes)	(6 bytes)	(2 bytes)	(2 bytes)		(4 bytes)
RPR Header	DSID	SSID	MACIDA	- MAGSA	PT=ET	HEC	Payload	FCS
<u> </u>	••••••	••••••		]				

(2 bytes)

PT=ET

(1 byte)

(2 bytes)

HEC

(2 bytes)

RPR Header

Resulting RPR Frame

(1 byte)

### mh\_BAH\_Frame\_095.pdf

## **RPR** Control Packet

(2 bytes)	(1 byte)	(1 byte)	(2 bytes)	(2 bytes)		(4 bytes)
RPR Header	DSID		PT=Control	HEC	RPR Control Payload	FCS

Values of DSID/SSID

- from MAC DA/SA (e.g., using • May, but need not, be derived SID DB)
- Must be a member of the Ring Topology Image

(4 bytes)

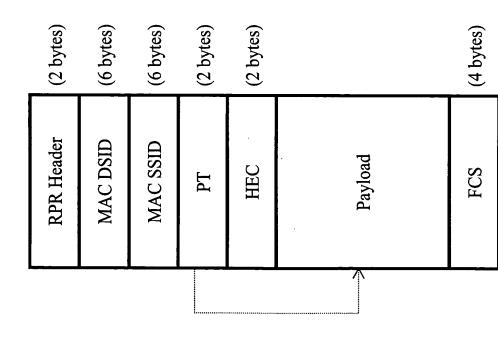
FCS

Payload

Marc Holness



## Frame Structure with Station Identifiers: Option #2a



- Frame syntax unchanged
- Frame semantics changed?
- MAC SA and DA (prior to HEC) always in the Ring local address domain
- All fields prior to HEC are specific to managing packet flow on the RPR LAN
- Packets with Remote MAC address are carried in the RPR frame Payload
  PT field indicates RPR addressing
- Local traffic (with local MAC addressing) use the Payload to carry Client data.

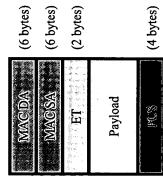
hierarchy



# Option #2a: Example

Locally Originated and Terminated Packet Flow

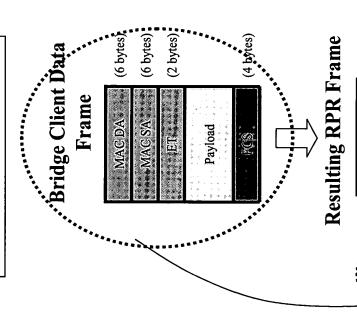
#### Router/Host/Server Client Data Frame

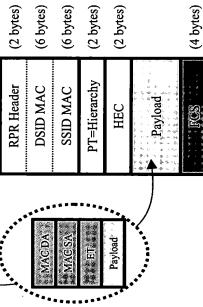


## Resulting RPR Frame

(2 bytes)	(6 bytes)	(6 bytes)	(2 bytes)	(2 bytes)		(4 bytes)
RPR Header	DSID=MAC DA	SSIDHMACSA	PT=ET	HEC	Payload	FCS

Packet Flow Involving Bridges





mh\_BAH\_Frame\_095.pdf

### RPR Control Packet

(2 bytes)	(6 bytes)	(6 bytes)	(2 bytes)	(2 bytes)		(4 bytes)
RPR Header	DSID	SSID	PT=Control	нвс	RPR Control Payload	FCS

Values of DSID/SSID

- May, but need not, be derived from MAC DA/SA (e.g., using SID
- Must be a member of the Ring Topology Image





## Open Issues

• Certain members of BAH believe that this option results in a different format for local addresses versus remote addresses





# Option Comparison

Category	Option #2a	Option #1a	Option #1b	Option #1c	Option #1d
No change to frame format					
No impact to existing MAC reception rules					
Avoids introduction of distribution and uniqueness algorithm need to manage Station label identifiers.					
Can support Bridging with Flooding proposals.					
Can support Bridging with Spatial Re-Use proposals.					
Can support multiple flooding techniques (e.g., source stripping, TTL scoping, etc.)					
No impact to currently defined Service interface between 802.17 MAC and MAC Clients.					
Maximum Frame Tax (Ring Configuration dependent – Ring has at least 1 Bridge operating with Spatial Reuse)					
Minimum Frame Tax (Ring Configuration dependent – Ring does not have any Bridges resident, or has at least 1 Bridge but does not operates a Broadcast media)					





# Option Comparison

The Cooper	<b>=</b>	Option	Option		Option #1c
Category		#1a	#1b	Label SID	MACSID
Fixed pre-HEC fields					
Bridge support for source stripping					
Same frame format for Bridge and non-Bridge devices					
Is Format in the domain of 802.17?					